STATE OF CALIFORNIA

ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION

PUBLIC UTILITIES COMMISSION

DRAFT

ENERGY ACTION PLAN II

IMPLEMENTATION ROAD MAP FOR ENERGY POLICIES

June 8, 2005

I. INTRODUCTION AND SUMMARY

A. Overview and Summary

In 2003, the three key energy agencies in California – the California Energy Commission (CEC), the California Power Authority (CPA), and the California Public Utility Commission (CPUC) – came together in a spirit of unprecedented cooperation to adopt an "Energy Action Plan" (EAP)[1] that listed joint goals for California's energy future and set forth a commitment to achieve these goals through specific actions.

The EAP was a "living document" meant to change with time, experience, and need. The CPUC and the CEC have worked together to prepare this draft Energy Action Plan II identifying the actions necessary to continue forward movement on California's energy future.[2] We support the commitment to cooperation among state agencies embodied in the original EAP and reflected in the State's coordinated actions over the past two years and desire to increase that comprehensiveness. We seek the active participation of the Department of Business, Transportation, and Housing, the Resources Agency, the California Independent System Operator (CAISO), the California Environmental Protection Agency (Cal-EPA) and other agencies with energy-related responsibilities in taking this draft EAP II Road Map to final form and then ensuring that its goals and actions are achieved.

EAP II is not intended to develop or present new policy initiatives. Rather, it is an implementation plan for state energy policies that have been developed through the Governor's Executive Orders, instructions to agencies, public positions, and appointees' statements; the CEC's Integrated Energy Policy Report (IEPR); the CPUC and CEC processes; the agencies' policy forums and legislative direction. We expect to revise this roadmap, as needed, to reflect the Governor's formal energy plan and his response to the CEC's IEPR, as well as any changes in responsibilities resulting from the proposed energy agency reorganization.

This EAP II represents both a refinement and strengthening of the foundation prepared by EAP I, as well as a look forward to the actions needed over the new few years. Our overarching goal is for California's energy to be adequate, affordable, technologically advanced, and environmentally sound. Energy should be adequate and reliable, provided when needed and where needed. Energy must be affordable to households, business and industry, and avoid environmental damage. We must use advanced technologies and we need to improve economic and environmental conditions to lead the way to a better energy future. These goals affirm the original objectives of EAP I.

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[1] EAP I can be viewed at the CPUC's website at <http://www.cpuc.ca.gov/PUBLISHED/REPORT/28715.htm> or at the CEC's website at <http://www.energy.ca.gov/energy_action_plan/2003-05-08_ACTION_PLAN.PDF>.

[2] The Consumer Power and Conservation Financing Authority was a co-agency in EAP I. Funding for the agency was eliminated in SB 1113 (Chesbro) Chapter 208, the 2004-2005 budget. No additional funding is proposed in the Governor's 2005-2006 budget.

We will achieve these goals by implementing specific and measurable actions throughout California's energy sector. In a significant expansion of the electricity and natural gas focus of EAP I, the scope of this new Road Map includes transportation fuels, reflecting the importance of these energy resources in California's energy picture and the potential impacts of their use on the environment. It also emphasizes that research, development and demonstration activities are critical to implementing energy goals.

We continue to support strongly the "loading order" – endorsed by Governor Schwarzenegger – that was at the heart of the first EAP and which describes our preferences for future resource additions. It has energy efficiency and demand response as the State's preferred means of meeting growing energy needs. After cost-effective efficiency and demand response, we turn to renewable sources of power. To the extent efficiency, demand response and renewable resources are unable to satisfy increasing energy and capacity needs, we support clean fossil-fired generation. Simultaneously, the bulk electricity transmission grid and distribution facility infrastructure will be improved to support growing demand centers and the interconnection of new generation.

We also see the need to provide open, transparent, and compelling information and education to all stakeholders and consumers in the State. The agencies are committed to more effective information dissemination through increased cooperation among all branches of government, businesses, and energy organizations. In particular, we pledge to remove remaining barriers to transparency in the procurement processes in the State and to increase outreach to consumers by providing improved education and services regarding energy efficiency, demand response, rates, climate change, and the opportunities to reduce the environmental impacts of energy usage.

The Energy Action Plan is intended as an implementation roadmap for the entire State, not only the 75-80 percent of California that is served by investor-owned utilities. While some of the actions described herein apply solely to investor-owned utilities, in general they should be seen as applying equally to the customer-owned utilities, even when that aspect is not specified.

B. EAP I Accomplishments

Since 2003, California has worked diligently and successfully to implement EAP I, as described below. The many successes are described in Appendix A. They include:

- Establishment of aggressive energy efficiency conservation goals for the State's investor-owned utilities (IOUs) of 2,631 gigawatt hours (GWh) annually by 2013.
- Adoption of new building and appliance standards, effective in 2005 and subsequent years.
- Increase in demand response goals of over 1,200 megawatts (MW) by 2005.
- Initiation of proceedings to oversee the rollout of advanced metering infrastructure in utility service areas over the next 3-5 years.

- Setting in motion the acceleration of the State's Renewable Portfolio Standard from 2017 to 2010 and beginning approval of contracts for new renewable projects in California.
- Permitting of 8,345 MW of new generation, approximately 7,000 MW of which has become operational.
- Construction and dedication of additional transmission on Path 15, the major interconnection between northern and southern California.
- Establishment of working groups to facilitate transmission projects to access renewable resources in the Tehachapi and Salton Sea areas.
- Addition of over 1,000 MMcfd of interstate pipeline capacity bringing natural gas to California and over 20 Bcf of storage capacity.
- Initiation of a proceeding to achieve 3,000 MW of distributed solar systems in California.
- Establishment of a natural gas research and development program to facilitate more efficient use of natural gas in California.
- Establishment of greenhouse gas reduction targets for California.

II. SPECIFIC ACTION AREAS

1. Energy Efficiency

As stated in EAP I and reiterated here, energy efficiency is the resource of first choice for meeting California's energy needs. Reliance on energy efficiency to the maximum extent possible in California will minimize the state's contribution to climate change impacts. California's energy efficiency programs are the most successful in the nation for achieving cost-effective reductions in energy use. These savings are the result of continued progress in cost-effective building and appliance standards and from ongoing approval of new and augmented efficiency programs implemented by investor-owned utilities (IOUs), customer-owned utilities, and other entities. To achieve the full energy efficiency potential that exists in California, we must focus not only on developing and supporting programs, but also on adequate evaluation, measurement, and verification of efficiency programs, increased public outreach and education, and research, development, and demonstration. The agencies will take the following specific actions:

KEY ACTIONS:

1. Significantly expand efforts to improve public awareness and adoption of energy efficiency. Special attention should be given to low income, non-English speaking, and other hard-to-reach communities.
2. Implement the Governor's Green Buildings Initiative to improve the energy use in all State and commercial buildings by 20 percent by 2013.[3]

[3] See Executive Order S-20-04, dated December 14, 2004, at <http://www.dot.ca.gov/hq/energy/ExecOrderS-20-04.htm>.

3. Adopt new appliance standards, effective in 2005 and 2006, supplementing those adopted in December 2004.
4. Adopt new building standards that include demand response technologies and consideration of integrated photovoltaic systems and other clean on-site generation, for implementation in 2008.
5. Increase the availability of State-sponsored low-interest loans for energy efficiency and clean distributed generation investments.
6. Approve IOU and third party 2005-2007 energy efficiency funding by late 2005, and add, verifiable performance incentives for IOU energy efficiency investments that are comparable to incentives for supply investment options in 2006.
7. Update utility evaluation, measurement and verification (EM&V) protocols so that energy efficiency is fully integrated into resource planning, emission reduction benefits are quantified, and compliance goals are verified.
8. Identify and support opportunities to reduce electricity demand related to the water supply system during peak hours and opportunities to reduce the energy needed to operate water conveyance and treatment systems.
9. Adopt the AB 549 Report on efficiency in existing buildings and pursue legislation and regulations to implement its findings.

2. Demand Response

California is in the process of transforming its electric utility distribution network from a system using 1960s era technology to an intelligent, integrated network system that is focused on information technology. This transformation can decrease the costs of operating and maintaining the system and also provide end-use customers with accurate information on energy use and cost. With the implementation of well-designed dynamic pricing tariffs, California can lower consumer costs and increase system reliability. In order to achieve this transformation, the agencies will increase the emphasis on ensuring that appropriate, cost-effective technologies are chosen, on public education regarding the benefits of such technologies, and on developing tariffs and programs that result in cost-effective savings.

KEY ACTIONS:

1. Issue decisions on the proposals for statewide installation of advanced metering infrastructure for all small commercial and residential IOU customers by early 2006.
2. Adopt, as appropriate, dynamic pricing tariffs for summer 2006, particularly critical peak pricing tariffs for customers with advanced metering systems.
3. Educate Californians about the time sensitivity of energy use and the benefits and effects of dynamic pricing tariffs.
4. Create standardized mechanisms to measure and evaluate demand response to ensure savings are verifiable.
5. Integrate demand response into the IOUs' procurement efforts and California's planning protocols.

6. Facilitate market designs that provide a "level playing field" for demand response opportunities.

3. Renewables

California can reduce its greenhouse gas emissions, moderate its increasing dependence on natural gas, and mitigate the associated risks of price volatility by aggressively developing renewable energy resources to meet the Renewable Portfolio Standard (RPS) requirements. The RPS requires 20 percent of IOU energy sales to come from renewable sources by 2017. In the EAP, we incorporated the acceleration of the 20 percent target from 2017 to 2010. We are analyzing the steps necessary to achieve Governor Schwarzenegger's higher renewable standard goal of 33 percent of electricity sales by 2020. The state must ensure that the utilities' RPS and other procurement activities are sufficient to reach state policy goals, streamline and make transparent its approval processes, ensure that funding for renewable resources reflects policy priorities, and provide the necessary infrastructure for delivery of power from new renewable projects. We intend that our increasing reliance on renewable resources in California and the western region will help mitigate energy impacts on global climate change and the environment.

KEY ACTIONS:

1. Approve expeditiously contracts from the initial IOU RPS solicitations and interim renewable solicitations and approve agreements for any necessary supplemental energy payments.
2. Facilitate the IOU RPS solicitations for 2005 and beyond, while incorporating improvements in the planning and procurement process.
3. Ensure new transmission lines are built to access renewable resources through the state's comprehensive, integrated transmission planning process.
4. Develop and implement a program to achieve the 3,000 MW goal of the Governor's "1 Million Solar Roofs" initiative.[4]
5. Identify and implement procedures for integrating an increasing amount of renewable resources into the electricity grid, and for streamlining permitting and market structures that facilitate development of needed renewable resources.
6. Implement RPS standards for energy service providers (ESPs) and community choice aggregators (CCAs) to ensure all load serving entities are participating in the RPS program.
7. Work with customer-owned utilities in the development of their RPS plans and incorporate their results in a comprehensive statewide review to ensure that California reaches its renewable energy goals statewide.
8. Identify western state policies and strategies to achieve production of 30,000 MW of clean energy across the west by 2015, consistent with the Western Governors' Association initiatives.[5]

[4] View the Governor's press release at <http://www.governor.ca.gov/state/govsite/gov_htmldisplay.jsp?sCatTitle=Press%20Release&sFilePath=/govsite/spotlight/august20_update.html>.

9. Complete the Western Renewable Generation Information System (WREGIS) to accurately account for renewable generation through an electronic certificate tracking system while also laying the necessary groundwork for studying and potentially implementing a renewable energy credits (RECs) trading system for meeting RPS goals.

4. Electricity Market Structure

To promote dependable, affordable, environmentally responsible wholesale and retail markets, the agencies, working in cooperation with the CAISO, must foster sound market rules, increase regulatory certainty, and improve coordination with the rest of the West's electrical system. Californians pay some of the highest utility rates in the nation and the State must take action to decrease overall retail energy bills and to improve rate structures so that rates are transparent and consumers have the tools to manage their energy usage. The agencies commit to reducing total retail energy bills by all means possible, including supporting programs for energy efficiency, demand response, and self-generation, assuring that the utilities' supply portfolios are least cost, and increasing education and outreach. Partnering with private industry, the State will also identify and implement actions, such as the development of capacity markets, to enhance reliability and promote investment in energy infrastructure serving California.

KEY ACTIONS:

1. Complete and implement by February 2007, the CAISO's Market Redesign and Technology Upgrade (MRTU) to reform California's wholesale electricity market and to ensure adequate market mitigation to protect California consumers.
2. Complete and refine, as necessary, the current IOU electricity procurement process to ensure that it is transparent, open and fair, proceeds in a timely fashion, and achieves California's resource adequacy requirements.
3. Restructure the IOU rate-making process to reduce the number of proceedings, create more transparency in consumer electricity rates and adopt rates based on clear cost-causation principles.
4. Develop rules that would allow for an effective core/non-core retail market structure, including mechanisms to guard against cost-shifting, preserve reliability, and achieve RPS goals.
5. Work to develop capacity markets, including possible tradable capacity rights and obligations, to create appropriate incentives and flexibility for power plant development.

5. Electricity Infrastructure

Significant capital investments will be needed over the next decade to augment existing facilities, replace aging infrastructure and ensure that California's electrical system can meet current and future needs at reasonable prices without over-reliance on a single fuel source. Even with the

[5] See WGA Policy Resolution 04-14, June 22, 2004, at <http://www.westgov.org/wga/policy/04/clean-energy.pdf>.

emphasis on energy efficiency, demand response, and renewable resources, investments in conventional power plants will be needed. The State will work to establish a regulatory climate that encourages investment in environmentally-sound conventional electricity generation resources.

In addition, an expanded electric transmission system infrastructure is required to mitigate grid congestion and bring new renewable and conventional power plants on line. Transmission planning and permitting must provide a more timelier, seamless, and comprehensive statewide process for moving transmission projects through the planning phase and into construction. Finally, the distribution system, which has the most direct effect on reliable service for consumers, must be continually updated and reinforced.

KEY ACTIONS:

1. Ensure that all load serving entities (LSEs) meet the state's adopted reserve and resource adequacy requirements of a 15-17 percent planning reserve by June 2006 through a reasonable mix of short-, medium- and long-term resource commitments.
2. Encourage cost-effective and environmentally-sound supply development to ensure reliability and consistency with the State's energy priorities.
3. Manage California's aging electricity infrastructure to coordinate maintenance and outages and manage retirements.
4. Encourage development of environmentally-sound distributed generation projects.
5. Develop and implement an integrated, comprehensive, statewide transmission planning process that eliminates bottlenecks, improves reliability, and accesses new renewable resources.
6. Establish a statewide transmission corridor planning process to create and protect critical transmission corridors for potential future development.
7. Develop a streamlined methodology to expedite siting and certification review of proposed transmission projects.
8. Apply the environmental adder as a resource selection criterion in IOU procurement decisions.

6. Natural Gas Supply and Demand

To ensure reliable, long-term natural gas supplies to California at reasonable rates, the Agencies must first work to reduce or moderate demand for natural gas. Because natural gas is becoming more expensive, and because electricity demand growth is expected to be met significantly by increases in natural gas-fired generation, reducing consumption of electricity and diversifying electricity generation resources are major elements of any plan to mitigate natural gas supply problems. The State must also promote infrastructure enhancements, such as additional interstate pipeline capacity and increased use of in-state storage, and seek to diversify our supply sources, including access to liquefied natural gas (LNG) facilities on the west coast.

KEY ACTIONS:

1. Ensure that utility and privately-owned natural gas backbone and receipt point capacity, storage capacity, and local transmission capacity are sufficient to meet California's peak demand needs.
2. Support the development of additional in-state natural gas storage to enhance reliability and mitigate price volatility.
3. Support the State's LNG Interagency Permitting Working Group and a process to facilitate the evaluation of LNG facility proposals.
4. Establish standards for the timing of and payment for capacity additions and for firm rights to transmission access.
5. Establish rules for emergency supply and backstop capacity for non-core customers.
6. Evaluate the appropriateness of current rules for natural gas quality.
7. Encourage solar hot water heating to reduce the reliance on natural gas for water heating.

7. Transportation Fuels

Transportation of California's goods and population constitutes the third major energy area (in addition to electricity and natural gas) that requires actions to ensure a secure future. Today, California's gasoline and diesel markets are characterized by increasing demands, tight supplies, barriers that make it difficult to reduce demand and increase supplies, and high and volatile prices. California's petroleum-based fuel import, storage, and processing facilities have little excess capacity, but expansion of supply infrastructure is time-consuming and difficult. California imports about half of the petroleum and petroleum products it uses and its dependence on this increasingly expensive energy resource continues to grow. Further, petroleum-based transportation fuel is a major contributor of carbon dioxide, the principal global climate change catalyst. California must find ways to reduce its use of oil in all cost-effective ways, such as driving more fuel efficient gasoline and diesel vehicles, adopting new automotive technologies such as hybrids and fuel cells, finding substitutes for oil, reducing single-passenger vehicle commutes, and reducing congestion. At the same time, we must ensure continuing supplies of clean gasoline and diesel to sustain California's economic vitality.

KEY ACTIONS

1. Support state legislation that establishes a goal and time frame to set California on a path to reducing its dependence on petroleum fuels, and establish a process to monitor and measure the state's progress in reducing consumption of petroleum fuels.
2. Establish a coalition with other states and stakeholders for the purpose of influencing the federal government to double the Corporate Average Fuel Economy (CAFE) standards.
3. Support federal legislation to allow the purchase of high-efficiency gasoline and diesel vehicles in meeting the fleet procurement rules of the Energy Policy Act.

4. Increase the use of high-efficiency and dedicated non-petroleum fueled vehicles in state and local fleets, and identify cost-effective opportunities to expand the infrastructure for fleet use of non-petroleum fuels.
5. Initiate and support a vehicle efficiency education program.
6. Ensure that California port authorities accommodate the need for critical petroleum importing infrastructure in port-related strategic planning processes.
7. Ensure that permitting of critical petroleum infrastructure is carried out in an expeditious and environmentally-sound manner.
8. Establish a strategic planning process with local governments and regional planning organizations to identify opportunities to reduce transportation energy consumption through improved public transit and land use planning.
9. Pursue policies that simultaneously achieve reductions in petroleum fuel use as well as criteria pollutant and GHG emissions.
10. Undertake an independent biennial review of the California Hydrogen Highway Network effort and the state of hydrogen technologies; initiate and lead an outreach plan to inform the public of the benefits and objectives of the California Hydrogen Highway Network
11. Complete the first 100 hydrogen stations in the State on a 50/50 funding match basis with the private sector.

8. Research, Development, and Demonstration

Technological innovations are necessary to California's continued success in the energy field. The agencies are committed to encouraging research, development, and demonstration (RD&D) in technologies that will allow California to achieve its policies to make energy efficiency and renewable resources both more effective and more cost-competitive. We must encourage RD&D for conventional generation sources and transportation fuels to reduce emissions, increase efficiency, and help mitigate environmental impacts.

1. Translate RD&D on energy efficiency technologies into future energy efficiency tools and standards to ensure continuing technology improvements.
2. Allocate R&D funding for energy efficiency and demand response, including new communication and control technologies, planning models, end-use technologies, software and valuation methodologies, in accordance with policy priorities.
3. Reflect public policy priorities in RD&D funding for new renewable technologies and greenhouse gas mitigation technologies, including efficiency and renewable generation technologies, as well as transportation sector fuel and efficiency improvements.
4. Implement cost-effective dry-cooling technologies and reduce once-through cooling practices to minimize the impact of new generation on California's water resources.

5. Align public purpose natural gas RD&D to reflect supply policies affecting biogas, syngas, and improved long-term storage reservoir management, safety and efficiency.
6. Support RD&D to improve the efficiency of light-, medium-, and heavy-duty gasoline and diesel vehicles; reduce the cost of producing, distributing and dispensing non-petroleum fuels; use biomass waste material in producing transportation fuels; improve state-of-the-art vehicle technologies; and capitalize on the synergies of mobile and stationary applications.
7. Support clean coal technology research and development, and continue to develop methods for capturing and storing significant amounts of CO2, either as an integral part of the energy conversion process or in pairing with external CO2 sequestration.

9. Climate Change

Governor Schwarzenegger signed an Executive Order on June 1, 2005, that continues California's leadership position in the fight against global warming and environmental protection by establishing greenhouse gas (GHG) emission reduction targets.[6] The targets call for a reduction of GHG emissions to 2000 levels by 2010; a reduction of GHG emissions to 1990 levels by 2020; and a reduction of GHG emissions to 80% below 1990 levels by 2050. Implementation of state agency programs that reduce or avoid additional carbon emissions will be critical in ensuring that the Governor's policy goals are met. The Governor has identified CalEPA as the lead agency to coordinate efforts and has called upon the CEC, CPUC and other agencies to be active players in ensuring the Governor's targets are met.

California must identify, monitor, reduce, and offset adverse effects on the environment from the growing demand for energy. Global climate change is the most serious concern and immediate, significant steps must be taken to address climate change. Its symptoms are already evident in California. Developing energy efficiency, demand response, and renewable resources to the maximum extent possible in California and the western region will minimize our contribution to climate change. Progress on alternative transportation fuels and efficiency of transportation use will help to minimize climate change impacts and to provide better air quality in California.

KEY ACTIONS:

1. Implement programs needed to meet the Governor's GHG emission reduction goals, track the emission reductions achieved by such programs, and provide regular updates on the progress made toward meeting the goals.
2. Establish 2010, 2020, and 2050 (GHG) reduction targets for the IOUs to track progress on meeting the Governor's GHG emission reduction targets.
3. Coordinate with CalEPA on the proceeding that is reviewing establishment of a cap and trade program for IOUs.
4. Coordinate with other state agencies and stakeholder groups to develop strategies to reduce greenhouse gas emissions.

[6] Executive Order S-3-05.

5. Ensure that electricity supplies serving California, from any source, are consistent with the Governor's climate change goals.
6. Participate in public outreach efforts to educate residents and businesses in California on climate change impacts and actions to mitigate emissions.
7. Encourage all participants in the electricity and natural gas industry to participate in the California Climate Action Registry and improve reporting of GHG emissions.
8. Participate fully in regional initiatives, such as the Western Governors Association's Clean, Diverse Energy Advisory Committee (CDEAC) efforts and the West Coast Climate Initiative.[7]
9. Identify methodologies to quantify the expected costs and benefits of climate change policies.

[7] See WGA's Clean and Diversified Energy Initiative webpage at <http://www.westgov.org/wga/initiatives/cdeac/index.htm>. Also see <http://www.climatechange.ca.gov/westcoast/index.html> for information on the Global Warming Initiative.

APPENDIX A

EAP I Progress Report

I. Optimize Energy Conservation and Resource Efficiency

1. Implement a voluntary dynamic pricing system to reduce peak demand by as much as 1,500 to 2,000 megawatts by 2007.

Status: In Progress

- The CPUC authorized voluntary demand response programs for large customers, with statewide potential estimated at 520 MW, and a statewide two-year pilot program to study the demand response capability of residential and small commercial customers.
- The CEC provided funding to install 23,300 interval meters on large customers starting in 2001 and the CPUC directed the IOUs to complete the process and authorized funding when general funds were exhausted.
- Pursuant to CPUC directions, the IOUs have submitted plans to deploy advanced metering infrastructure (AMI) systems for all customers for consideration in 2005 and 2006.

2. Improve new and remodeled building efficiency by 5 percent

Status: Achieved

- The CEC adopted building energy efficiency standards for existing and new buildings, effective October 2005, and adopted appliance standards effective mid-April 2005 and subsequent years.
- CPUC and CEC approved programs to provide building tune-ups and retro-fits, and to install efficient lighting, HVAC, and retrofits.

3. Improve air conditioner efficiency by 10 percent above federally mandated standards.

Status: Achieved

- The CEC supported the Attorney General's successful multi-state lawsuit against the Federal Department of Energy's rollback of air conditioner standards, allowing California to implement the ten percent higher standards.
- The CPUC approved programs to install energy efficient air conditioners, improve ventilation, and to promote upgrades and enhancements in codes and standards.

4. Make every new state building a model of energy efficiency.

Status: In Progress

- CPUC ordered IOUs to emphasize commercial and state building efficiency programs in their 2006-2008 program cycle as a step to implement the Governor's Green Building Initiative.

- The CEC is developing a benchmarking methodology, which would apply to all commercial buildings in California. The CEC is scheduled to submit the proposed methodology and implementation schedule to the Governor in July 2005.

5. Create customer incentives for aggressive energy demand reduction.

Status: Achieved

- The CPUC established demand response and interruptible programs that provide customer incentives through bill credits or discounted rates, with 1,590 MWs of interruptible load available.
- The CPUC established free energy audit services to help customers evaluate their demand response capability.
- The CPUC authorized programs for IOUs and 3rd parties to offer rebates for energy efficient products such as lighting, fixtures, windows, coolers, HVAC and refrigeration systems, programmable thermostats, pool pumps & motor replacements.

6. Increase local government conservation and energy efficiency programs.

Status: Achieved

- The CPUC approved $49 million of partnership programs for local governments and schools to provide energy efficiency incentives, services, and education for customers in 2004 and 2005.
- The CEC completed two bond issuances totaling $66 million bond to finance energy efficiency projects for local governments and schools.

7. Incorporate, as appropriate per Public Resources Code section 25402, distributed generation or renewable technologies into energy efficiency standards for new building construction.

Status: In Progress

- The CEC is investigating how solar generation can be included in the 2008 Building Energy Efficiency Standards.

II. Accelerate the State's Goal for Renewable Generation

1. Add a net annual average of up to 600 MW of new renewable resource portfolio.

Status: In Progress

- IOU contracts filed in 2005 add between 285-586 MW[1] of new renewable generation, with contracts in negotiation for 2005 and 2006 pushing the total well over 600 MW.

[1] Some contracts allow the generators to increase output in an incremental fashion. Final output is determined by how many units are brought on line per contract.

- The 2002 and 2003 interim renewable solicitations resulted in over 620 MW in contracted capacity from existing renewable generation facilities.

2. **Establish key RPS implementation rules by June 30, 2003.**

   Status: Achieved

   - The CPUC issued a decision on June 2003, that laid the foundation for the RPS program and issued four additional decisions by July 2004, that set standard contract terms and conditions, established a benchmark price for contracts, created a methodology for calculating transmission costs, and developed an evaluation methodology for ranking RPS bids.

3. **Facilitate an orderly and cost-effective expansion of the transmission system to connect potential renewable resources to load.**

   Status: Ongoing

   - In conjunction with the CEC's report on the location of renewable resource potential in California, the CPUC prepared a comprehensive transmission plan for conceptual facilities for wind, solar, geothermal and biomass renewable electricity generation.
   - Pursuant to CPUC order, SCE filed an application to build transmission to the Tehachapi region in anticipation of tapping 4,000 MW of wind resource potential. The CPUC is now processing the request.

4. **Initiate the development of RPS compliance rules for energy service providers and community choice aggregators.**

   Status: Achieved

   - The CPUC held legal briefing and evidentiary hearings regarding ESP and CCA participation in the RPS, with a framework decision expected in Q3 2005 and an implementation decision to follow.

5. **Coordinate implementation with all relevant state agencies and with municipal utilities to facilitate their achievement of the standard.**

   Status: In Progress

   - The CEC, CPUC, CPA and CAISO initiated a statewide forum in 2004 and have held three coordination meetings.
   - The CEC provides assistance to municipal utilities on an ad hoc basis and is tracking their progress towards meeting the EAP goals for renewables.

6. **Encourage companies that invest in energy conservation and resource efficiency to register with the state's Climate Change Registry.**

   Status: Achieved

   - The CEC and CPUC joined the Registry in order to lead by example.
   - The CPUC held an en banc in February 2005 in conjunction with other state agencies to explore climate change issues and sent letters to CPUC-regulated entities encouraging them to join the Registry.

- The CPUC issued a decision in April 2005 directed the IOUs to include marketing and outreach activities to support the Registry in their program plan applications.
- The CEC provides technical assistance to the Registry on its reporting and certification protocols.

III. Ensure Reliable, Affordable Electricity Generation

1. **Add new generation resources to meet anticipated demand growth, modernize old, inefficient and dirty plants and achieve and maintain reserve levels in the 15 percent-18 percent range. Current estimates show a statewide need for 1500 – 2000 MW per year.**

   Status: Achieved

   - Since the EAP was adopted in March 2003, the CEC permitted 8,345 MW of new power plants, 6,730 MW became operational, and 1,380 MW more will be online by the end of July 2005.
   - In January and October 2004, the CPUC adopted resource adequacy requirements for the IOUs and ESPs to secure a 15-17% reserve margin by June 2006.

2. **Finance a few critical power plants that the agencies conclude are necessary and would not otherwise be built. An estimated 300 MW of peaking capacity located in critical areas is needed to provide local reliability, help achieve adequate reserves, and reduce congestion and the need for new transmission lines.**

   Status: Achieved

   - Through the CPUC's procurement process, 500 MW of previously mothballed generation has returned to service in Southern California under IOU contracts.
   - Significant new generation is now under construction after timely contract and permit review and approval by the CPUC and CEC, respectively, including Mountainview (1,054 MW), Palomar (550 MW), and Otay Mesa (570 MW).

3. **Work with the CAISO to ensure the development of a workable, competitive wholesale energy market that has meaningful market power mitigation rules.**

   Status: In Progress

   - State agencies participate in the CAISO's Market Redesign and Technology Upgrade (MRTU) process scheduled to be implemented in February 2007 and have supported at FERC the CAISO's development of a new market model based on locational marginal pricing (energy pricing that incorporates the cost of transmission congestion) and which includes extensive market power mitigation rules.

4. **Monitor the electricity market to identify any exercise of market power and manipulation, and work to improve FERC-established market rules to correct any observed abuses.**

   Status: Ongoing

   - State agencies participate in FERC proceedings, the CAISO Market Surveillance Committee, Seams Steering Group, and the Western Interconnection Market Monitoring Group to ensure adequate monitoring of electricity markets and to identify abuses of market power.

IV. Upgrade and Expand the Electricity Transmission and Distribution Infrastructure

1. **The agencies will collaborate, in partnership with other state, local, and non-governmental agencies with energy responsibilities, in the California Energy Commission's integrated energy planning process to determine the statewide need for particular bulk transmission projects. This collaboration will build upon the California Independent System Operator's annual transmission plan and evaluate transmission, generation and demand side alternatives. It is intended to ensure that state objectives are evaluated and balanced in determining transmission investments that best meet the needs of California electricity users.**

   Status: Ongoing

   - State agencies collaborated on the CEC's 2003–2004 IEPR energy planning processes which provided policies to improve the transmission planning and permitting processes.
   - State agencies are collaborating in the 2005 IEPR process to prepare a strategic transmission grid plan for the State with recommendations for transmission infrastructure investments.
   - The CPUC participates in the CAISO's annual transmission planning process of quarterly stakeholder meetings where projects are studied for one, five and ten year horizons, as proposed by PG&E, SCE, SDG&E, or by the CAISO.

2. **The Public Utilities Commission will issue an Order Instituting Rulemaking to propose changes to its Certificate of Public Convenience and Necessity process, required under Public Utilities Code § 1001 et seq., in recognition of industry, marketplace, and legislative changes, like the creation of the CAISO and the directives of SB 1389. The Rulemaking will, among other things, propose to use the results of the Energy Commission's collaborative transmission assessment process to guide and fund IOU-sponsored transmission expansion or upgrade projects without having the PUC revisit questions of need for individual projects in certifying transmission improvements.**

   Status: Achieved

   - The CPUC opened this rulemaking in January 2004, but the methodology to coordinate need determination between agencies remains under

development in CAISO and CPUC forums and so no final decision has been reached.

3. **The Public Utilities Commission will ensure that IOUs build out and properly staff and maintain distribution systems to meet California's growth, provide reliable service, and stand ready to restore service after unplanned distribution system outages.**

   Status:

   - The CPUC authorized the IOUs in their recent general rate cases to increase spending by four to seven percent on capital additions for distribution infrastructure over the next three years, with an emphasis on improving reliability.

4. **The Energy Commission will work with municipal utilities to help ensure completion of transmission expansion or upgrade projects in their systems for which the collaborative transmission assessment process finds a need.**

   Status: In Progress

   - The CEC is assessing municipal utilities' transmission expansion plans and will recommend actions on near-term transmission projects (including municipal utility projects) in its November 2005 Strategic Transmission Investment Plan.

V. Promote Customer and Utility Owned Distributed Generation

1. **Promote clean, small generation resources located at load centers.**

   Status: Achieved

   - The CPUC adopted favorable rate policies for DG, including exemptions from stand-by and departing load charges, and expanded net metering.
   - State incentive programs paid rebates leading to 116 MW of renewable and clean DG from the CPUC's Self Generation Incentive Program and 53 MW of primarily solar from the CEC's Emerging Renewables Program.
   - The CPUC and CEC streamlined interconnection rules, resulting in 487 MW of interconnected DG since January 2001 and resulting in an 80% reduction in the time to interconnect.

2. **Determine whether and how to hold distributed generation customers responsible for costs associated with Department of Water Resources power purchases.**

   Status: Achieved

   - The CPUC adopted a DG cost responsibility surcharge in April 2003 and provided exemptions for a capped amount of clean and large-scale DG, which the CEC manages, monitors, and publicly reports.

3. **Determine system benefits of distributed generation and related costs.**

   Status: In Progress

   - The CEC Public Interest Energy Research Program has invested over $19 million to quantify the system benefits and effects of interconnecting DG to the electric grid.
   - The CPUC and CEC are developing a common DG cost-benefit methodology for utility procurement and planning processes, and for setting incentive levels for renewable and clean DG, with evidentiary hearings held in May 2005 and a decision expected by the end of 2005.

4. **Develop standards so that renewable distributed generation may participate in the Renewable Portfolio Standard program.**

   Status: Achieved

   - The CPUC determined that the owner of renewable DG facilities owns the renewable energy credits associated with the generation of electricity from those facilities and is eligible to participate in the RPS program.

5. **Standardize definitions of eligible distributed generation technologies across agencies to better leverage programs and activities that encourage distributed generation.**

   Status: In Progress

   - The CEC developed a working definition in the 2005 IEPR related proceedings and the CPUC is developing a formal definition through evidentiary hearings, with a decision expected by the end of 2005.

6. **Collaborate with the Air Resources Board, Cal-EPA and representatives of local air quality districts to achieve better integration of energy and air quality policies and regulations affecting distributed generation.**

   Status: In Progress

   - The agencies are participating in the Cal-EPA process to develop a 2007 DG Emission Standard.

7. **The agencies will work together to further develop distributed generation policies, target research and development, track the market adoption of distributed generation technologies, identify cumulative energy system impacts and examine issues associated with new technologies and their use.**

   Status: In Progress

   - EAP I formalized a long-standing CPUC/CEC Distributed Generation Collaborative.
   - The CEC completed a comprehensive set of recommendations to revise California's interconnection rules, and submitted them to the CPUC for public comment in February 2005. The CPUC expects to issue a decision on the recommendations in Q3 2005.

VI. Ensure Reliable Supply of Reasonably Priced Natural Gas

1. **Identify critical new gas transmission, distribution and storage facilities needed to meet California's future needs.**

   Status: In Progress

   - The CEC initiated its 2005 Integrated Energy Policy Report, which includes an assessment of long-term natural gas infrastructure needs.
   - The CPUC adopted flexible capacity contract approval procedures, and approved natural gas distribution pipeline requirements for the Southern California Gas Company, San Diego Gas and Electric Company, Pacific Gas and Electric Company, and Southwest Gas.
   - Over 1,000 MMcfd of interstate pipeline capacity to California has been added, mainly due to Kern River expansion in May 2003.
   - Over 20 Bcf of storage capacity has been added since early 2002, and more capacity is expected in the next few years.

2. **Monitor the gas market to identify any exercise of market power and manipulation, and work to improve FERC-established market rules to correct any observed abuses.**

   Status: In Progress

   - The CPUC and CEC have joined FERC investigations of price rises in early 2003 and early 2004, conduct monthly meetings to monitor infrastructure and market conditions, and prepare monthly reports summarizing California's natural gas infrastructure and operations.
   - Agencies' efforts contributed to the FERC conclusion of the El Paso market manipulation case, resulting in customer refunds of hundreds of millions of dollars.

3. **Evaluate the net benefits of increasing the state's natural gas supply options, such as liquefied natural gas (LNG).**

   Status: In Progress

   - The CPUC adopted policy rules in September 2004, that establish a level playing field for consideration of new natural gas supplies from LNG, and adopted procedures by which natural gas utilities would obtain new contracts with LNG suppliers.
   - The CEC prepared a report in early 2005 of existing safety rules and regulations governing LNG terminals, and updated its long-term outlook on natural gas demand and supplies available to California.
   - The CEC chairs monthly meetings of the LNG Interagency Working Group to ensure a smooth flow of information from all perspectives on LNG issues affecting California.

4. **Support electric utilities and gas distribution companies entering into longer-term contracts as a hedge against volatile and high spot market prices.**

   Status: In Progress

   - The CPUC has not taken specific actions to encourage additional long-term physical natural gas supply contracts as a policy and instead has encouraged natural gas and electric utilities to use financial instruments and storage to hedge against volatile spot market natural gas prices.